Hy-PEM XP Series

Hydrogen made easy

Installation and user manual

DISCLAIMER: all the informations, pictures and schemes contained in this manual may be varying according to new products releases and versions as well as new improvements over performances, components and regulations. External features and colours might be thus changing depending also on suppliers of single components composing the product in its entire appearance.

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Scope of the manual

This manual provides operation and maintenance instructions for model HY-PEM XP-100, HY-PEM XP-160, HY-PEM XP-250, HY-PEM XP-300, HY-PEM XP-500, HY-PEM XP-600, HY-PEM XP-1000 hydrogen generators.

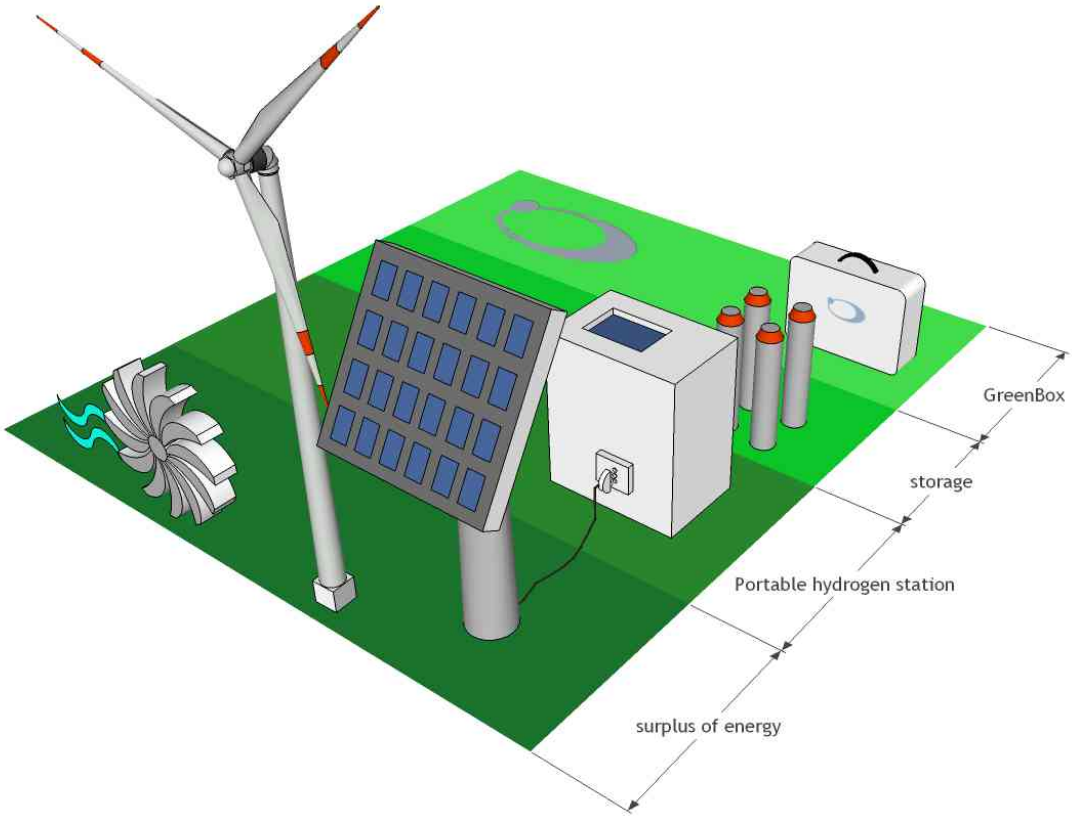
Introduction

Congratulations for buying an Hy-PEM XP easy electrolysis system by H2planet, the greatest and easiest way to experience hydrogen personal hydrogen production in a simple, safe and suitable way.

Hy-PEM XP provides you clean ultrapure hydrogen you need with no contaminants ideal for fuel-cell use, and with full compatibility with H2planet MyH2 CE certified metal hydrides canisters product line. You can thus maximize lifespan of both fuel-cells and metal hydrides canister by relying on a ultrapure hydrogen gas.

Hydrogen chain by H2planet

Hy-PEM XP can be your hydrogen easy supply for all of compatible H2planet hydrogen fuel-cell generators of GreenBox and GreenHub series. An entire carbon-free and pollution free process that can be easily installed thanks to the amazing HYnONE H2planet proposal **just needing water and renewable sources of energy** as main ingredients!



Enquire your local H2planet dealer or to greenhub@h2planet.eu for further information about the most suitable hydrogen on-site production option for your generator and specific needs.

Specifications

Specifications of the different models of hydrogen generator

Hydrogen flow rate STP: Standard temperature and pressure (20°C, 1 bar)	Model HY-PEM XP-100	0 - 100 cc/min at STP
	Model HY-PEM XP-160	0 - 160 cc/min at STP
	Model HY-PEM XP-250	0 - 250 cc/min at STP
	Model HY-PEM XP-300	0 - 300 cc/min at STP
	Model HY-PEM XP-500	0 - 500 cc/min at STP
	Model HY-PEM XP-600	0 - 600 cc/min at STP
	Model Hy-PEM XP 1000	0 - 1000 cc/min at STP
Max outlet pressure	11 bar (159.5 psi)	
Purity	99.9999% (grade 6.0) designed for fuel-cells and metal hydrides canisters refills	
Weight (dry)	HY-PEM XP 100 – 160 – 250 – 300	17.5 Kg
	HY-PEM XP 500 - 600	18.0 Kg
	Hy-PEM XP 1000	20 Kg
Power consumption	Model HY-PEM XP 100	55W
	Model HY-PEM XP 160	80W
	Model HY-PEM XP 250	110W
	Model HY-PEM XP 300	125W
	Model HY-PEM XP 500	190W
	Model HY-PEM XP 600	220W
	Model Hy-PEM XP 1000	320W
Input voltage	120-240V / 50-60 Hz	
Fuse (not user replaceable)	120V - 6.3 A.T. 240V – 4 A.T. (5x20)	
Pressure accuracy	0.1 bar (± 0.5 %)	
Display	Graphic Display, 128x64 Pixels	
Index of protection	IP2x	
Operating conditions: - temperature - relative humidity	+15°C to +40°C 80% up to 31°C, decreasing linearly to 50% at 40°C	
Over voltage category	II	
Pollution degree	2	
Sound pressure level	46 dBA	
Case dimensions	230 x 355 x 430 mm (WxHxD)	

Notes on FCC compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and

can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING!

Any changes or modifications to this equipment not expressly approved by the manufacturer may void the user's authority to operate the equipment.

Correct use

The hydrogen generator is designed to produce hydrogen for private, reasearch or laboratory use. The unit must only be operated for this purpose, according to the specifications and instructions provided in this manual. In particular, the following warnings must be observed at all times:

- Indoor use only
- Never operate the unit in below-zero temperatures. This will cause irreversible damage to the electrolysis cell.
- Only use pure water (see “Filling the water tank”).
- Only operate the unit in a room with sufficient ventilation (see “Placing the unit”).
- Always unplug the unit from the mains power supply before accessing the internal components for replacement.
- Only the parts described in the “Spare parts list” can be replaced by the user.

Packing list

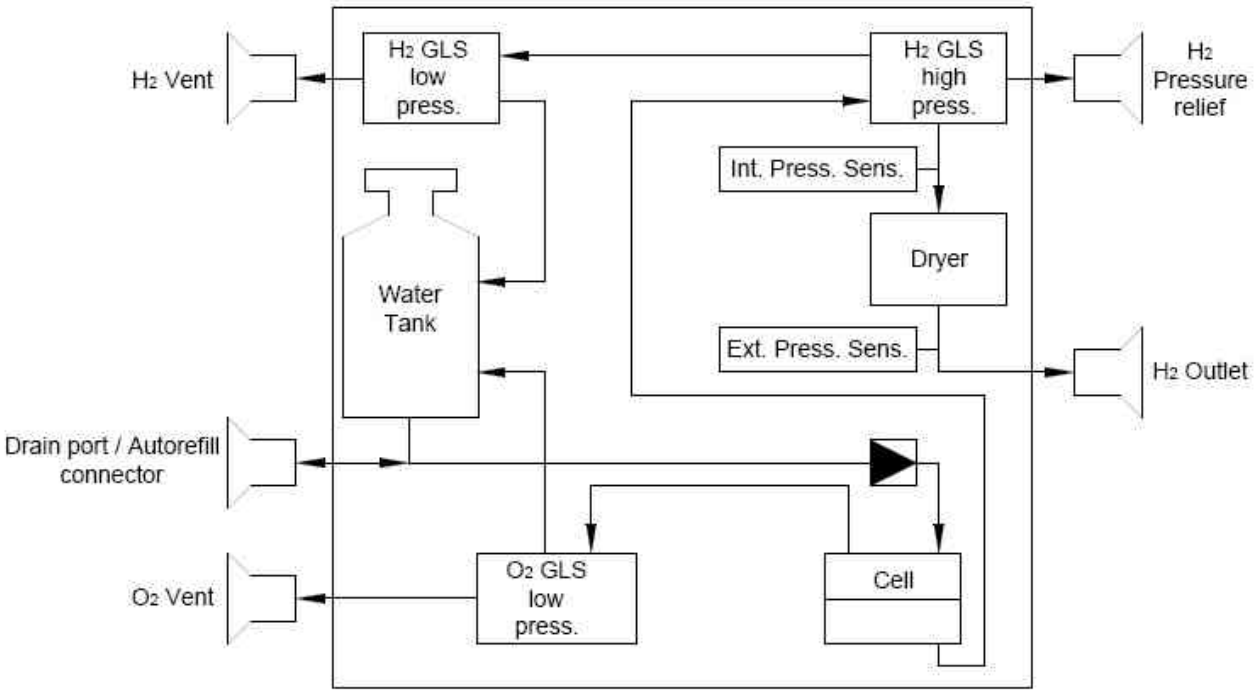
List of items included in the shipment

Quantity	Description
1	Hydrogen generator
1	Instruction manual
1	Deionizer triangle bag
1	Water drain with flexible tubing
1	Power cable

Description

The hydrogen generator produces pure hydrogen (and oxygen as a by-product) by the electrolysis of water. The key element of the generator is an electrochemical cell assembly which contains a solid polymer electrolyte. No free acids or alkalines are used. De-ionized or pure, distilled water

is the only liquid which may come into contact with the cell. As this is consumed it must be refilled from time to time as required.
The generated hydrogen gas is accumulated in the hydrogen/water separator and the desiccant housing. The pressure is controlled by a pressure transducer. The output pressure is indicated on the display. The hydrogen is dried by passing it through a drying tube The hydrogen then passes through the shutoff valve and exits the generator throughthe outlet port at the rear.



Installation

Receiving the generator

All units have been carefully inspected before transport. Visual checks for damage and functional tests should be performed upon receipt. Any damage must be immediately noted and reported. The generator must only be returned according to the shipping instructions provided.

Placing the generator

The hydrogen generator must be placed on a flat, level, vibration-free, shock-free surface. Do not place the generator over a source of heat, as this may cause the device to overheat. The unit should not be in contact with any other objects on any side, and the air inlet must not be blocked. Leave at least 30cm of free space at the rear for ventilation. Do not operate the generator in a sealed or unventilated room, or in close proximity to open flame or other sources of ignition. Do not operate the generator at below freezing temperatures. Operation is guaranteed at operating temperatures between +5 and +40°C.

WARNING!

Normal precautions for any hydrogen supply should be taken when using the generator. DO NOT use in sealed or unventilated rooms. DO NOT use in close proximity of open flames or other sources of ignition.

Symbols used on the generator

⏚ Earth symbol: this symbol marks the earth connections to the chassis of the hydrogen generator.

Gas connections

Pure dry hydrogen at regulated pressure is available at the hydrogen outlet port at the rear of the generator. This port must be connected to 1/8" tubing using a stainless-steel or copper Swagelock connector. Teflon connectors are not suitable. If you purchased H2planet Hy-PEM XP connection kit (supplied separately on request) just please tighten nut at tip of 1/8" hose by screwing it un threaded male on back of Hy-PEM XP generator. By the use of a proper monkey-wrench tighten the nut gently being sure the nut with hose is well tightened over the male of the OUTLET port. The pressure at this port is adjusted and shown on the display. The hydrogen relief port at the rear of the unit can be connected to an exhaust hood or other vent system.

WARNING!
The line from the relief port should never connected in such a way that back pressure can develop.

IMPORTANT! **Remove the sylicon caps from the OXYGEN VENT and HYDROGEN VENT plugs before operating the unit. Keep these caps for unit storage and/or transportation.**	

Electrical connections

Check the setting of the voltage selector on the rear of the unit. The set voltage is indicated by the white arrow. To change the voltage, proceed as follows:

- Using a small screwdriver, remove the voltage selector insert.
- Replace the voltage selector insert so that the white arrow points to the correct voltage.

Remote connections (optional)

The hydrogen generators are fitted with an optional remote control feature, which allows the user to check the status of the machine from a remote position, and to start/stop the production of hydrogen.
The contacts used in the remote control are potentially free relay contacts. The contacts can be configured via software as normally-open or normally-closed (see the Configuration section). The maximum voltage and current ratings for the contacts are 1A / 48V. The pin configuration of the remote connector is shown in the table below.

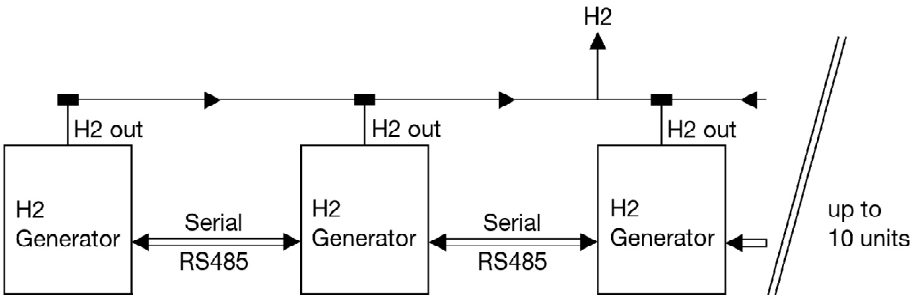
Remote connector pin configuration

Pin	Description
1+2	Start (12-30 VDC polarity not important)
3+4	Standby (System not OK)
5+6	Reaching normal pressure (Overproduction)
7+8	Refill water (Low water)
9+10	Low water level (Too low water)
11+12	Bad water
13+14	Change water (Bad water pre alarm)

Cascading (option)

The RS-485 interface allows up to 10 generators to be operated in parallel mode. One unit has to be defined as the master, while the others operate in "Slave" mode. All the slaves need to be configured with individual ID numbers. Communication between the generators requires a standard D-sub 9 pin serial cable. The serial ports are connected as follows:

Master RS 485 out ➔ Slave 1 RS 485 out - Slave 1 RS 485 in ➔ Slave 2 RS 485 in ....



Configuration

Configuring the Master

1. Enter “menu”.
2. Scroll until the display shows “**Master**“ and enter: set the value using the +/- buttons to Yes;
3. Exit and scroll until the display shows “**Number of slaves**“ and enter: set the number of slaves connected to the master using the +/- buttons.
4. Exit and scroll until the display shows “**ID Nr**“ and enter: set 1;
5. Exit.

Configuring the Slaves

1. Enter “menu”.
2. Scroll until the display shows “Master“ and enter: set the value using the +/- buttons to No;
3. Exit and scroll until the display shows “ID Nr“ and enter: set the ID number of the slave. Use a different number for each slave, starting from ID Nr. 2
4. Exit.

The configuration is now complete.

Operating in Master Slave Mode

Connect the gas outputs of all the generators to the same line. Open all the main valves.
If the configuration and the serial connection is correct, the slaves will show “Slave Mode“ after starting up. Change the pressure setting on the master, and the slaves will follow the master.

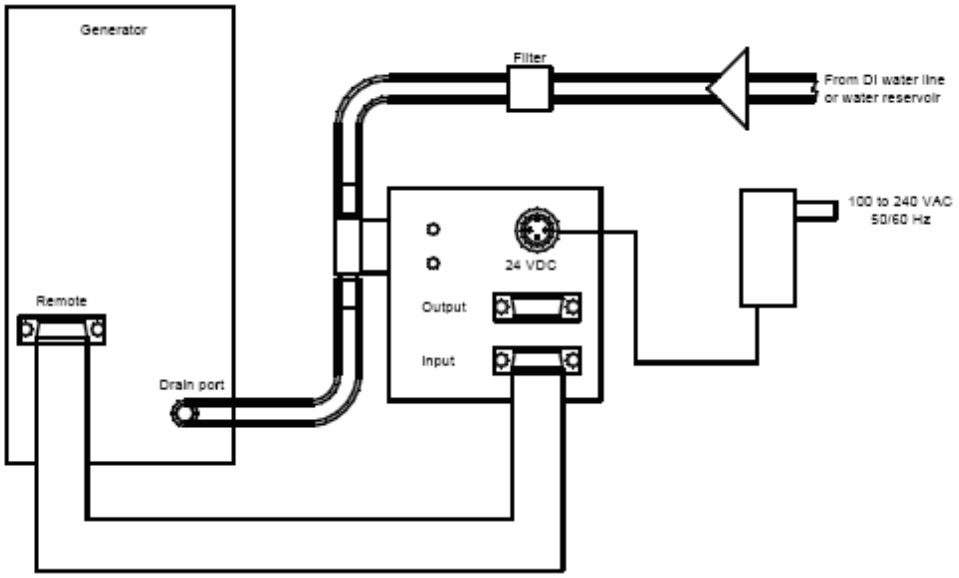
IMPORTANT!

The cascading function will only work properly if the gas outlets on all the generators are connected together and the main valves are in the open position.

Auto refill (option)

Description

The auto refill option gives you the possibility to refill the water tank of the generator automatically from a external water source. You can either use a DI water line or a water reservoir. The correct refill time is depending on the pressure of the water source.
A higher pressure needs a shorter refill time. **Max. pressure is 60 PSIG**. If you are using a water reservoir, make sure the minimum water level in the reservoir is 2-3 feet higher than the top of the generator.



Installation steps

1. Connect the water tubes and the electric wires as in the diagram above.
2. Configure the generator as followed:
    - Set the generator to standby
    - Set the auto refill function to ON
    - Adjust the auto refill time to 8 s
3. Test the auto refill time as followed:
    - Empty the water tank
    - Start the generator
    - Obtain the refilling level (should be approx 30 to 50 % of the max level)
    - If the refill level is to little increase the auto refill time.
    - Repeat this steps until you have a correct refilling volume.

Note : every time you go into the auto refill menu, you have to put the generator to standby and start it again.

Warning
If the refill time is to high, the water tank of the generator can overflow, and damage the unit.

Initial start-up

Filling the water tank

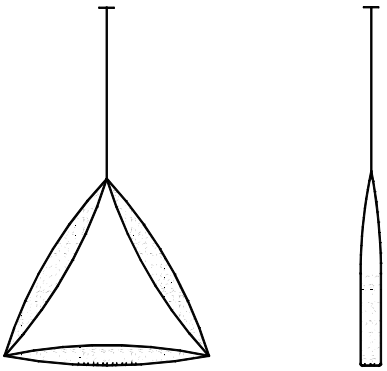
To fill the generator with water, remove the white/black cap on top of the water tank. Carefully fill the tank with distilled or deionized water. The conductivity of the water used in the generator must not exceed 2µS.
Fill the tank to the maximum level indicator. Replace the cap, and the leave the small hole free for ventilation.

WARNING!
Do not fill the water tank higher than the marked level.

CAUTION
To prevent contamination of the cell assembly, it is important to use only deionized or distilled water in the generator. Water containing metallic impurities will contaminate or damage the cell, and will void the warranty.

Installing the deionizer bag

After having filled the tank with water, the deionizer bag (supplied) must be placed in the tank. Inspect the bag thoroughly for holes or tears, indicated by loose deionizer beads on the outer surface. If the bag is damaged in any way, discard and replace it with a new one. Only use original parts (see Spare Parts). Wash the deionizer bag in deionized water before proceeding.



Insert the free end of the “T” fastener through the hole in the centre of the water filler cap, until it is securely fastened. The bag should not block the outlet at the bottom of the tank. Once in place, the bag should not be allowed to dry out.
This new triangle deionizer bag has been designed for a higher water purifying capacity. It is recommendable to use this bag for new generators, in the first 4 to 6 months of operation. After this time you can use the standard deionizer bag (see “spare parts”).

Starting the unit

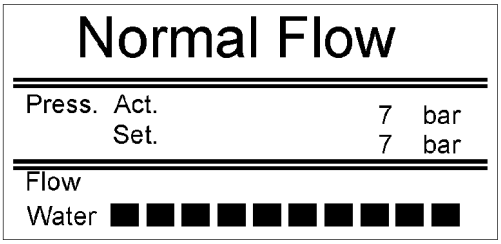
WARNING FOR A PROPER USE: please always double-check that the hydrogen content in the user device such as hydrogen absorbing MyH2 compatible metal hydrides canister be empty of hydrogen. You can easily do that before refilling by the Hy-PEM connection kit before connecting it to Hy-PEM XP back panel. If you need to purge out the remaining hydrogen out of the canister please do it in a safe ventilated place (possibly outdoor) without sparkles, flames or cigarettes and connect the male to the quick conenctor female of the MyH2 canister and release last hydrogen content out by turning the knob counter-clockwise.

Once all of the previous operations have been performed, the generator is ready for operation.:

1. Fill the generator with distilled or deionised water. Mind conductivity of the water used in the generator must not exceed 2µS.
2. Connect the power supply cable and turn the power switch to the ON position.
3. Enter the desired set pressure, possibly up to 9-10bar to get the best performances to refill compatible H2panet metal hydrides product series MyH2, using the Menu buttons and selecting “Pressure adjust”. Push “Exit” button twice to get back to the initial display window.
4. Press the start button to start the unit.
5. The unit will immediately begin to build up pressure. The LCD display will show the message "reaching normal pressure", and the H2 flow bar will indicate maximum flow (fully illuminated).
6. Once the pressure reaches the set value (100%), the LCD display will show the message "normal pressure" and the H2 flow bar will indicate no flow.
7. Select “Open” to let the hydrogen flow inside the hose/H2planet Hy-PEM XP connection kit and once pressure value reached the set value readable on “Press. Act.”, purge out small air and hydrogen quantity by pushing the tip of male Swagelok quick connector for 2-3 seconds in order to purge out every impurity from hosing.
8. Wait again until the act pressure reaches the set value. These values are shown on the LCD display.
9. Connect the H2planet Hy-PEM connection kit by by the mean of tip male quick connector. If you need to refill compatible MyH2 metal hydrides canisters please **first verify all the hydrogen has been released and purged out from the canister** and pressure inside the canister be as lower as possible near to 1-2 bar. Push firmly the male connector into the

female of MyH2 metal hydrides storage canister until a click is heard. Please follow refilling instructions of your MyH2 canister to properly refill it by the use of a basin containing cool water (max 15°C, the lower the better) and keeping MyH2 in horizontal position inside the basin. NOTE: refilling procedure could take hours depending on storage capability of your canister.

10. After the initial pressure drop, the outlet pressure should slowly stabilise at the set pressure. A continuing drop in pressure indicates a gas leak in the external equipment or too high hydrogen consumption. When refilling MyH2 cartridges pressure drop is initially normal due to high absorption capability of the system.
11. The generator is now in normal operating conditions:



12. You will realize the canister is full when the pressure visible on display is the same set initially and “Flow” indication on display will be zero or nearly zero (“Flow” progressive indication to zero).
13. Disconnect quick connector on top of your MyH2 canister from it. Push “Close” button and then “Stop” to finish the procedure. Wait 1-2 minutes before switching I/O button on back of unit OFF.

IMPORTANT: In the event of any faults or damage, first notify H2planet the problem. Please also provide full details of the problem, including the model and serial number. Instructions will then be provided for the service or the return of the unit. Only if return authorization is provided by the producer as per these instructions, the device will be received and repaired.

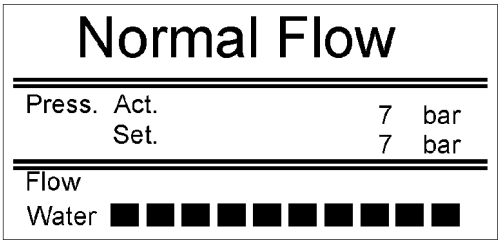
Operation

LCD display

All important operating information is shown on the display.

Layout of the display

The LDC display provide the following information.



First row, status information

Sts shows current information on the operating status of the generator.
The information can be divided into 3 groups:

- *Information*: displays normal operating status
- *Pre-alarm*: indicates that a maintenance intervention will soon be required; accompanied by an audible signal.

- *Alarms*: indicates that maintenance intervention is required and that the machine has been shut down; accompanied by an audible signal.

List of messages displayed

MESSAGE	DESCRIPTION	TYPE	ACTION
Standby	Device ready for H2 production.	Information	Press start
Reaching Normal Pressure	Device producing H2 and increasing pressure to the set value	Information	
Normal Pressure	Device producing H2 and has reached the set pressure value	Information	
Normal Flow	Device producing H2 and has reached the set pressure value, with H2 flowing	Information	
Refill Water	Water level approaching alarm threshold	Pre-alarm	Fill the tank with water
Change Water	The conductivity of the water has exceeded 33µs	Pre-alarm	Drain and then refill the tank; change the deionizer bag
Low Pressure	The set pressure can not be reached	Alarm	Check for internal or external leaks. Check max. H2 consumption
Low Water Level	There is too little water in the tank	Alarm	Refill the tank
Bad Water	The conductivity of the water has exceeded 38µs	Alarm	Drain and then refill the tank; change the deionizer bag
High Cell Voltage	High cell voltage	Alarm	Notify service agent

Second row, pressure information

Act is the actual pressure of the hydrogen, while Set is the set pressure.
The pressure can be increased using the ↑ button, or decreased using the ↓ button.

Third row, hydrogen flow

This row displays the current quantity of hydrogen being produced. Each point represents around 10 % of maximum capacity.
This graph also indicates approximately how much hydrogen is being consumed by the connected equipment.

NOTE

The last point on the flow graph will flash only. This indicates that the generator is producing at maximum capacity. In normal operation, this should not be the case, as it indicates that the consumption is too near the maximum limit, and the unit may shut-down if consumption increases further. Maximum flow is normal when the unit is building up pressure.

Fourth row, water quality

This graph shows the quality of the water.

With more than 3 points illuminated, water quality is good.
If only 3 or less points are illuminated, the conductivity of the water is around 33µS (pre-alarm level).
If only 1 point or no points are illuminated, the conductivity of the water is equal to or greater than 38µS (alarm). The generator will be shut down.

Start/Stop-Reset button

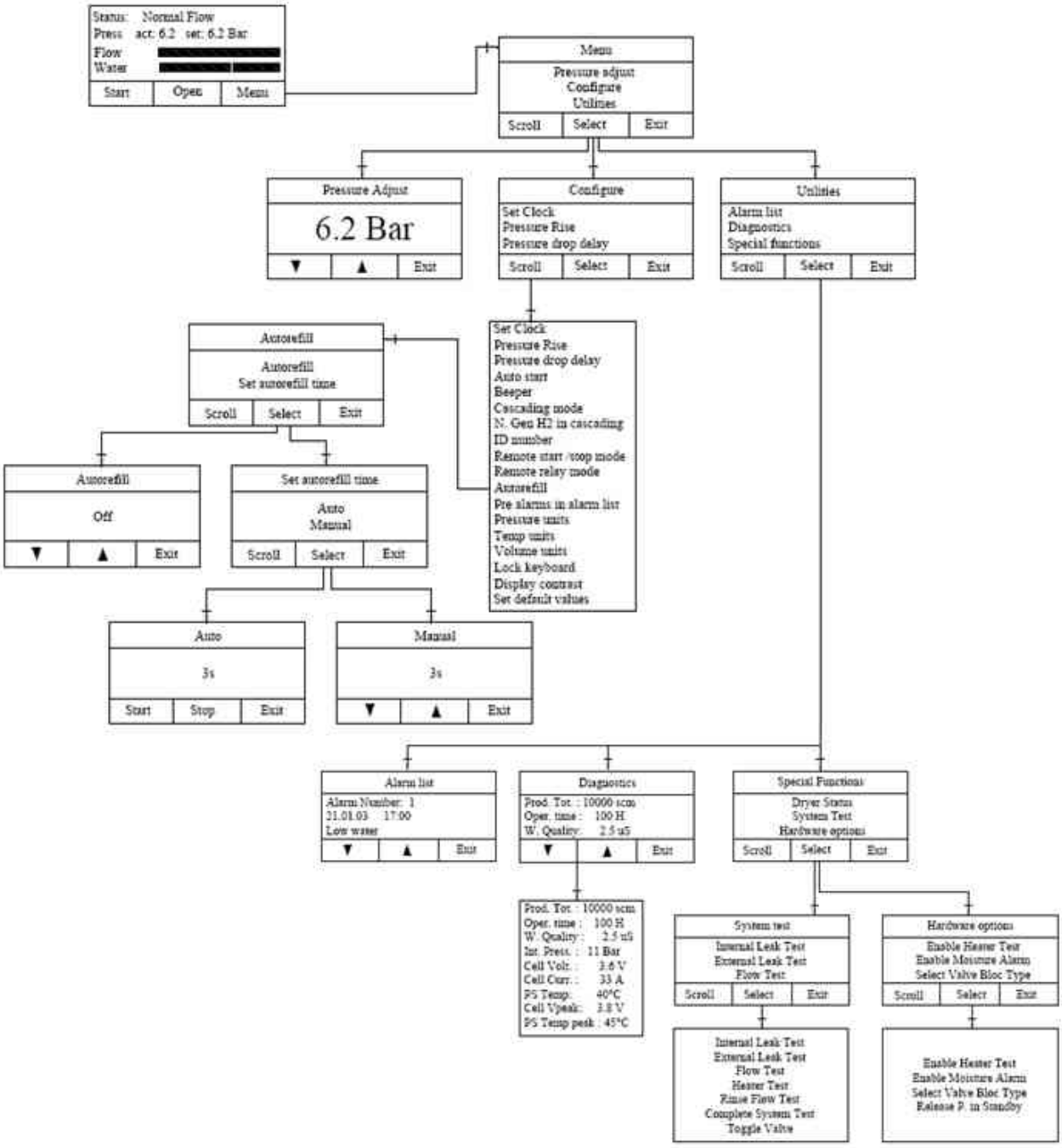
The Start/Stop button places the generator in normal operating mode from Standby and vice-versa. It is also used to re-start the unit following an alarm. When the problem leading to the alarm has been resolved, the generator must be reset using the Reset button, and then can be started by pressing the Start/Stop button.

Exit-Menu button

Silences the audible alarm. When the problem leading to the alarm has been resolved, the Reset button must be pressed before the generator can be restarted (also see Special functions).

The Reset button is also used to access the menu and select.
The button is also used to exit from a displayed voice of the menu tree.

Menu Tree



Configure parameters

Item	Description	Options / Range	Default
Pressure units	Sets the desired unit of measure for the pressure	bar / psi / kPa	bar
Volume units	Sets the desired unit of measure	scm (standard cubic	scm

	for the volume	meters) scf (standard cubic feet)	
Temp. units	Sets the desired unit of measure for the temperature	°C and °F	°C
Pressure rise	Sets how fast the pressure has to increase. If the pressure increases at a slower rate, a low pressure alarm is activated.	0.1 – 6.8 bar/min 1.4 - 100 psi/min	0.3 1.5
Pressure drop delay	Sets a delay in seconds to ignore a pressure drop (override low pressure alarm)	2 - 10 min	2
Auto start	Sets whether the unit automatically starts production when power is switched on.	YES / NO	NO
Beeper	Sets whether the audible signal is activated in the event of an alarm.	ON / OFF	ON
Master	Configures the unit as the Master for cascading operation	YES / NO	NO
Number of slaves	Enter the number of slaves connected to the master	0 - 32	0
ID number	Sets the ID number	0 - 32	0
Remote start/stop mode	Configures the remote start/stop function	Start/stop, Start only, Direct control	start/stop
Remote relay mode	Configures the remote relay contacts.	Normally open (NO) Normally closed (NC)	NC
Pre alarms in alarm log	If set to Yes, the pre alarms are also shown in the alarm log.	YES / NO	NO
Lock Keyboard	If set to Yes, the keyboard will be locked automatically after the generator is in the main window for more than 20s. To unlock the keyboard, press the unlock button and hold for 5s.	YES / NO	NO
Display contrast	Adjusts the contrast of the display.	0 - 10	5
Autorefill	If set to ON, the pre-level water alarm is used to trigger an	ON / OFF	OFF

	external pump or valve to refill the water tank		
Autorefill time	Sets the duration of water refilling after the pump or valve has been trigged	0-60 s	0

Diagnostic display

Item	Description	Max.
Production Tot.	Total production of hydrogen	99.999 scf 4000.00 scm
Operating time (h)	Total number of hours the unit operation	99.999 hours
Wat. quality (S)	Actual water conductivity	38 S
Cell current (A)	Actual cell current	-
Cell voltage (V)	Actual cell voltage	-
Cell voltage peak (V)	The maximum cell voltage in the life of the cell	-
PS. temp.	Actual temperature of the power supply	-
PS. temp. peak	The maximum temperature of the power supply reached	-

Maintenance

With proper care and maintenance, your hydrogen generator should provide you with years of trouble-free operation. There are no adjustments to be made to the generator. The only routine service operations are those described below.
Nevertheless, the generator should be inspected approximately every 2 years. Contact your supplier via email to techsupport@h2planet.eu

Routine maintenance

The following section describes the maintenance operations required for the correct operation of the hydrogen generator.

Cleaning

The internal components of the hydrogen generator do not need to be cleaned and should not be accessed by the user for cleaning. To clean the outside of the unit, only use a damp cloth (no detergents, acids or aggressive or abrasive substances.

Water refilling

The tank must be refilled when the water level approaches the lower level, and the Refill Water pre-alarm message appears.

Deionizer replacement

Rinse the water tank and replace the deionizer bags approximately every six months, or whenever the Change Water message appears.

Installing the new deionizer bag

After having refilled the tank with water, the new deionizer bag must be placed in the tank. Inspect the bag thoroughly for holes or tears, indicated by loose deionizer beads on the outer surface. If the bag is damaged in any way, discard and replace it with a new one. Only use original parts (see Spare Parts). Wash the deionizer bag in deionized water before proceeding.

Insert the free end of the “T” fastener through the hole in the centre of the water filler cap, until it is securely fastened. The bag should not block the outlet at the bottom of the tank. Once in place, the bag should not be allowed to dry out.

Returning the unit

In the event of any faults or damage, first notify the agent or distributor who supplied the unit. If this is not possible, inform the producer directly. Please also provide full details of the problem, including the model and serial number. Instructions will then be provided for the service or the return of the unit. Only if return authorization is provided by the producer as per these instructions, will the device be received and repaired by the producer. If the one year warranty has expired, or the fault is due to misuse of the unit, all repair and shipping costs are to be paid by the customer. All other costs are borne by the customer, except as otherwise expressly agreed upon.

WARNING!

If the unit has to be transported, make sure that the water tank is completely empty, and place the plug (supplied with the unit)on the oxygen vent at the rear of the unit. Close the small hole in the cap on the water tank with a strip of adhesive tape. Use suitable packaging. The unit should be transported in an upright position; this warning should be reported on the outside of the packaging

Spare parts list

The table below provides a list and description of the spare parts for the hydrogen generator. Please also refer to the corresponding figures.

List of spare parts HY-PEM XP 100

p/n	DESCRIPTION
H200-031	Deionizer bag
H200-030	New deionizer triangle bag
Hy-PEM XP200-004	Keyboard
HY-PEM XP201-001	Water tank + level sensor
HY-PEM XP200-002	Water tubing kit
H200-005	Water drain outlet + tube
HY-PEM XP200-003	Ball valve for cell IN
H200-007	G/L separator, complete with fittings
H200-008	Perma Pure drying tube
Hy-PEM XP200-005	Display
H200-013	Pressure release valve
H200-014	Gas outlet connector + check valve
Hy-PEM XP200-006	O2 separator
Hy-PEM XP200-007	H2 separator
Hy-PEM XP200-015	Rear intake fan
Hy-PEM XP200-016	Internal circulation fan
H200-021	Gas ON/OFF valve
H200-022	Connector for PermaPure tube
H210000-001	Complete cell
Hy-PEM XP200-011	Transformer 230 VA 50/60 Hz
Hy-PEM XP200-017	Start button 240/120 V 50/60 Hz
HY-PEM XP205-005	Main board
HY-PEM XP201-006	Cables
H210000-004	Cell service (on old cell)

List of spare parts HY-PEM XP 160

p/n	DESCRIPTION
H200-031	Deionizer bag
H200-030	New deionizer triangle bag
Hy-PEM XP200-004	Keyboard
HY-PEM XP201-001	Water tank + level sensor
HY-PEM XP200-002	Water tubing kit
H200-005	Water drain outlet + tube
HY-PEM XP200-003	Ball valve for cell IN
H200-007	G/L separator, complete with fittings
H200-008	Perma Pure drying tube
Hy-PEM XP200-005	Display
H200-013	Pressure release valve
H200-014	Gas outlet connector + check valve
Hy-PEM XP200-006	O2 separator
Hy-PEM XP200-007	H2 separator
Hy-PEM XP200-015	Rear intake fan
Hy-PEM XP200-016	Internal circulation fan
H200-021	Gas ON/OFF valve
H200-022	Connector for PermaPure tube
H210000-001	Complete cell
Hy-PEM XP200-011	Transformer 230 VA 50/60 Hz
Hy-PEM XP200-017	Start button 240/120 V 50/60 Hz
HY-PEM XP206-005	Main board
HY-PEM XP201-006	Cables
H210000-004	Cell service (on old cell)

List of spare parts HY-PEM XP 250

p/n	DESCRIPTION
H200-031	Deionizer bag
H200-030	New deionizer triangle bag
Hy-PEM XP200-004	Keyboard
HY-PEM XP201-001	Water tank + level sensor
HY-PEM XP200-002	Water tubing kit
H200-005	Water drain outlet + tube
HY-PEM XP200-003	Ball valve for cell IN
H200-007	G/L separator, complete with fittings
H200-008	Perma Pure drying tube
Hy-PEM XP200-005	Display
H200-013	Pressure release valve
H200-014	Gas outlet connector + check valve
Hy-PEM XP200-006	O2 separator
Hy-PEM XP200-007	H2 separator
Hy-PEM XP200-015	Rear intake fan
Hy-PEM XP200-016	Internal circulation fan
H200-021	Gas ON/OFF valve
H200-022	Connector for PermaPure tube
H210000-001	Complete cell
Hy-PEM XP200-011	Transformer 230 VA 50/60 Hz
Hy-PEM XP200-017	Start button 240/120 V 50/60 Hz
HY-PEM XP207-005	Main board
HY-PEM XP201-006	Cables
H210000-004	Cell service (on old cell)

List of spare parts - HY-PEM XPH 2, 300ml/min

p/n	DESCRIPTION
H200-031	Deionizer bag
H200-030	New deionizer triangle bag
Hy-PEM XP200-004	Keyboard
HY-PEM XP201-001	Water tank + level sensor
HY-PEM XP200-002	Water tubing kit
H200-005	Water drain outlet + tube
HY-PEM XP200-003	Ball valve for cell IN
H200-007	G/L separator, complete with fittings
H200-008	Perma Pure drying tube
Hy-PEM XP200-005	Display
H200-013	Pressure release valve
H200-014	Gas outlet connector + check valve
Hy-PEM XP200-006	O2 separator
Hy-PEM XP200-007	H2 separator
Hy-PEM XP200-015	Rear intake fan
Hy-PEM XP200-016	Internal circulation fan
H200-021	Gas ON/OFF valve
H200-022	Connector for PermaPure tube
H210000-001	Complete cell
Hy-PEM XP200-011	Transformer 230 VA 50/60 Hz
Hy-PEM XP200-017	Start button 240/120 V 50/60 Hz
HY-PEM XP206-005	Main board
HY-PEM XP208-006	Cables
H210000-004	Cell service (on old cell)

List of spare parts HY-PEM XP 500

p/n	DESCRIPTION
Hy-PEM XP200-004	Keyboard
HY-PEM XP201-001	Water tank + level sensor
HY-PEM XP200-002	Water tubing kit
H200-005	Water drain outlet + tube
HY-PEM XP200-003	Ball valve for cell IN
H200-007	G/L separator, complete with fittings
H200-008	Perma Pure drying tube
Hy-PEM XP200-005	Display
H200-013	Pressure release valve
H200-014	Gas outlet connector + check valve
Hy-PEM XP200-006	O2 separator
Hy-PEM XP200-007	H2 separator
Hy-PEM XP200-015	Rear intake fan
Hy-PEM XP200-016	Internal circulation fan
H200-021	Gas ON/OFF valve
H200-022	Connector for PermaPure tube
H210000-001	Complete cell
Hy-PEM XP200-011	Transformer 230 VA 50/60 Hz
Hy-PEM XP200-017	Start button 240/120 V 50/60 Hz
HY-PEM XP209-005	Main board
HY-PEM XP201-006	Cables
H210000-004	Cell service (on old cell)

List of spare parts HY-PEM XP 600

p/n	DESCRIPTION
H200-031	Deionizer bag
H200-030	New deionizer triangle bag
Hy-PEM XP200-004	Keyboard
HY-PEM XP201-001	Water tank + level sensor
HY-PEM XP200-002	Water tubing kit
H200-005	Water drain outlet + tube
HY-PEM XP200-003	Ball valve for cell IN
H200-007	G/L separator, complete with fittings
H200-008	Perma Pure drying tube
Hy-PEM XP200-005	Display
H200-013	Pressure release valve
H200-014	Gas outlet connector + check valve
Hy-PEM XP200-006	O2 separator
Hy-PEM XP200-007	H2 separator
Hy-PEM XP200-015	Rear intake fan
Hy-PEM XP200-016	Internal circulation fan
H200-021	Gas ON/OFF valve
H200-022	Connector for PermaPure tube
H210000-001	Complete cell
Hy-PEM XP200-011	Transformer 230 VA 50/60 Hz
Hy-PEM XP200-017	Start button 240/120 V 50/60 Hz
HY-PEM XP210-005	Main board
HY-PEM XP201-006	Cables
H210000-004	Cell service (on old cell)

List of spare parts HY-PEM XP 1000

p/n	DESCRIPTION
H200-031	Deionizer bag
H200-030	New deionizer triangle bag
Hy-PEM XP200-004	Keyboard
HY-PEM XP201-001	Water tank + level sensor
HY-PEM XP200-002	Water tubing kit
H200-005	Water drain outlet + tube
HY-PEM XP200-003	Ball valve for cell IN
H200-007	G/L separator, complete with fittings
H200-008	Perma Pure drying tube
Hy-PEM XP200-005	Display
H200-013	Pressure release valve
H200-014	Gas outlet connector + check valve
Hy-PEM XP200-006	O2 separator
Hy-PEM XP200-007	H2 separator
Hy-PEM XP200-015	Rear intake fan
Hy-PEM XP200-016	Internal circulation fan
H200-021	Gas ON/OFF valve
H200-022	Connector for PermaPure tube
H210000-001	Complete cell
Hy-PEM XP200-011	Transformer 230 VA 50/60 Hz
Hy-PEM XP200-017	Start button 240/120 V 50/60 Hz
HY-PEM XP210-005	Main board
HY-PEM XP201-006	Cables
H210000-004	Cell service (on old cell)

Contacts

For any doubt you can count on our experience and availability by calling (0039) 02.9098.9883 or by mail at staff@h2planet.eu

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